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Chaos in spin glasses HELMUT G. KATZGRABER, Theoretische Physik, ETH Zurich, FLORENT KRZAKALA, Laboratoire P.C.T., ESPCI Paris — We study the effects of small temperature as well as disorder perturbations on the equilibrium state of three-dimensional Ising spin glasses via an alternate scaling ansatz. By using Monte Carlo simulations, we show that temperature and disorder perturbations yield chaotic changes in the equilibrium state and that temperature chaos is considerably harder to observe than disorder chaos. Results in two space dimensions are also discussed.

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